



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-8434; Product Identifier 2015-NM-082-AD; Amendment 39-19057; AD 2017-19-27]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model DHC-8-401 and -402 airplanes. This AD was prompted by the discovery of cracking on two test spoiler power control unit (PCU) manifolds during testing by the manufacturer. This AD requires replacement of affected spoiler PCUs. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For Bombardier, Inc., service information identified in this final rule, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>.

For Parker-Hannifin Corporation service information identified in this final rule, contact Parker Aerospace, 14300 Alton Parkway, Irvine, CA, 92618; telephone 949-833-3000; fax 949-809-8646; Internet <http://www.parker.com>.

You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-8434.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-8434; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7318; fax 516-794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc., Model DHC-8-401 and -402 airplanes. The SNPRM published in the Federal Register on July 14, 2017 (82 FR 32496) (“the SNPRM”). We preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the Federal Register on January 13, 2016 (81 FR 1586) (“the NPRM”). The NPRM proposed to require replacement of affected spoiler PCUs. The NPRM was prompted by the discovery of cracking on two test spoiler PCU manifolds during testing by the manufacturer. The SNPRM proposed to require replacement of affected spoiler PCUs, and also proposed to add airplanes to the applicability. We are issuing this AD to prevent cracking of the spoiler PCUs that could lead to the loss of multiple flight controls and landing gear systems.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2015-07R2, dated December 14, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc., Model DHC-8-401 and -402 airplanes. The MCAI states:

During endurance and impulse testing of the spoiler PCU, cracks were discovered on two test spoiler PCU manifolds. Investigation determined that the crack initiation was due to the heat treat process. A cracked spoiler PCU manifold could cause the loss of one of the two hydraulic systems, resulting in the loss of multiple flight controls and landing gear systems. This condition, if not corrected, could adversely affect the continued safe operation and landing of the aeroplane.

This [Canadian] AD mandates the replacement of the affected spoiler PCUs.

Revision 1 of this [Canadian] AD was issued to extend the applicability to include additional aeroplane serial numbers and also modify the Corrective Actions to specifically mandate section 3.B of the [Bombardier Service Bulletin] SB 84-27-64, Revision A.

Revision 2 of this [Canadian] AD was issued to correct the SB referenced in the Background section. SB 84-27-64, Revision A should have been referenced in lieu of SB 84-27-63, Revision A.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-8434.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the SNPRM or on the determination of the cost to the public.

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the SNPRM for correcting the unsafe condition; and

- Do not add any additional burden upon the public than was already proposed in the SNPRM.

Related Service Information under 1 CFR part 51

Bombardier, Inc., has issued Service Bulletin 84-27-64, Revision A, dated July 26, 2016. This service information describes procedures for replacement of affected spoiler PCU manifolds.

Parker-Hannifin Corporation has issued Service Bulletin 390700-27-002, Revision 1, dated April 13, 2016. This service bulletin identifies affected spoiler PCUs.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 82 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Remove and replace affected PCUs	2 work-hours X \$85 per hour = \$170	\$10,000	\$10,170	\$833,940

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

“Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;

2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2017-19-27 Bombardier, Inc.: Amendment 39-19057; Docket No. FAA-2015-8434;

Product Identifier 2015-NM-082-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc., Model DHC-8-401 and -402 airplanes, certificated in any category, serial numbers (S/Ns) 4001, and 4003 through 4527 inclusive, equipped with spoiler power control unit (PCU) part numbers (P/Ns) 390700-1007 and -1009 and that have any spoiler PCU serial number identified in paragraph (c)(1), (c)(2), or (c)(3) of this AD.

(1) S/Ns 0474 through 1321 inclusive;

(2) S/Ns identified in section “4. Appendix” of Parker Service Bulletin 390700-27-002, Revision 1, dated April 13, 2016; and

(3) S/Ns 1394 through 1876 inclusive, without suffix “A.”

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight controls.

(e) Reason

This AD was prompted by the discovery of cracking on two test spoiler PCU manifolds during testing by the manufacturer. We are issuing this AD to prevent cracking of the spoiler PCUs that could lead to the loss of multiple flight controls and landing gear systems.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Removal/Replacement

Within 12,000 flight hours or 72 months after the effective date of this AD, whichever occurs first: Remove and replace the affected spoiler PCUs in accordance with paragraph 3.B. of the Accomplishment Instructions of Bombardier Service Bulletin 84-27-64, Revision A, dated July 26, 2016.

(h) Parts Installation Prohibition

After the actions required by paragraph (g) of this AD have been done, no person may install on any airplane, a spoiler PCU, part number 390700-1007 and -1009, with:

- (1) S/Ns 0474 through 1321 inclusive; or
- (2) S/Ns identified in section “4. Appendix” of Parker Service Bulletin 390700-27-002, Revision 1, dated April 13, 2016; or
- (3) S/Ns 1394 through 1876 inclusive, without suffix “A.”

(i) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 84-27-64, dated July 15, 2014.

(j) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as

appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2015-07R2, dated December 14, 2016, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-8434.

(2) For more information about this AD, contact Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7318; fax 516-794-5531.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (1)(3) and (1)(5) of this AD.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 84-27-64, Revision A, dated July 26, 2016.

(ii) Parker Service Bulletin 390700-27-002, Revision 1, dated April 13, 2016.

(3) For Bombardier, Inc., service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>.

(4) For Parker-Hannifin Corporation service information identified in this AD, contact Parker Aerospace, 14300 Alton Parkway, Irvine, CA, 92618; telephone 949-833-3000; fax 949-809-8646; Internet <http://www.parker.com>.

(5) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(6) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on September 14, 2017.

Jeffrey E. Duven,
Director,
System Oversight Division,
Aircraft Certification Service.

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